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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,036	01/19/2005	Kenji Maruyama	SHIGA7.004APC	1510
20995	7590	10/06/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			LEE, SIN J	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/522,036

Applicant(s)

MARUYAMA ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,10,12 and 15-22 is/are allowed.
- 6) ☒ Claim(s) 2,4-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-19-05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

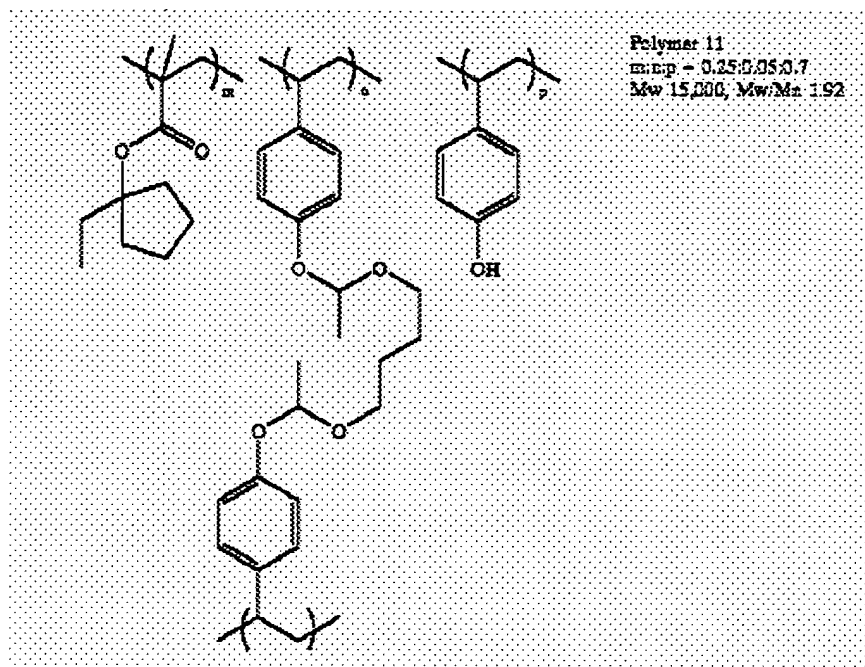
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2, 4-6, 8, 9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Hatakeyama (US 6,869,744 B2).

In one of the working examples (see Table 1), Hatakeyama teaches a chemically amplified positive resist composition containing Polymer 5 (10 pbw), Polymer 11 (90 pbw), a photoacid generator PAG 1, and a basic compound. Polymer 11 is shown below



, and this polymer teaches present formula (V) of claim 2. Hatakeyama's PAG 1 is (p-tert-butoxyphenyl)diphenylsulfonium camphorsulfonate (see col.55), and Hatakeyama teaches (col.42, lines 54-60, line 67, col.43, line 1) the equivalence of this photoacid generator and triphenylsulfonium nonafluorobutanesulfonate (which is also listed in present specification, pg.46). One skilled in the art would immediately envisage using triphenylsulfonium nonafluorobutanesulfonate as Hatakeyama's PAG. Therefore, the prior art teaches present inventions of claims 2, 4, 5, 6, 8, 9 and 11 (since Hatakeyama's composition teaches present chemical amplification type positive photoresist composition of claim 2, it is the Examiner's position that Hatakeyama's composition would *inherently be capable of* being used for a thick-film photolithography process used for forming a resist film having a thickness of 2-7 μm as presently recited in claims 8 and 9).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatakeyama (US 6,869,744 B2) in view of Takeda et al (US 2001/0035394 A1).

Although Hatakeyama does not teach present gamma-butyrolactone of claim 7, propylene glycol methyl ether acetate, which is the solvent used in Hatakeyama's working examples, and gamma-butyrolactone are known in the art as equivalent organic solvents used for a chemically amplified positive resist composition. Therefore, it would have been obvious to one skilled in the art to use gamma-butyrolactone as Hatakeyama's solvent because those two solvents were art-known equivalents at the time the invention was made. Thus, Hatakeyama in view of Takeda would render obvious present invention of claim 7.

5. Claims 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Hatakeyama'744 does not teach or suggest present step of forming a resist film having a thickness of 2-7 μm .

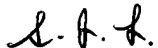
6. Claims 1, 3, 10, 12, and 15-22 are allowed. Hatakeyama'744 does not teach or suggest present resin (A) of claim 1 or present resin (A'') of claim 3. Hatakeyama'744 does not teach or suggest present alkali-insoluble unit (a2') having no acid dissociable dissolution-inhibiting group of claim 15.

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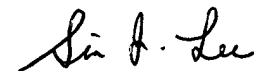
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee
October 2, 2005



SIN LEE
PRIMARY EXAMINER